ROPOX
Better ways to better days

CE



Smartbox, 30-69001-8

User Manual

Mounting Instructions

Keep always this folder with product!

PDF 5956 / 01.01.2011

Contents:

1. Introduction

If you want to avoid unnecessarily risk of trapping when installing several Ropox electrical height adjustable frames in one system, you can do so, by using our Smartbox. The intelligent anti-trapping system can be used when you have more electrical frames mounted next to each.
In these situations the Smartbox system will remove / eliminate the extra risk of trapping which is not covered by the standard Safety strips and safty stopplates.

Up to 4 FlexiElectric can be connected side by side with the use of the Smartbox. Above this you can also connect up to 4 VertiElectric side by side. This means that you can connect a maximum of 8 Smartboxes in one system. To see your combination possibilities, please refer to section 9.

Smartboxes must only be used together with Ropox products, such as FlexiElectric, VertiElectric or 4SingleElectric, and only when mounting and daily use are according to this manual, and the relevant manuals for FlexiElectric, VertiElectric or 4SingleElectric. The Smartbox will only be used if you have two or more units mounted close together, and in this situations you need one Smartbox per Controlbox in the system.

⚠ This document must ALWAYS be kept with the product and have been read and understood by the user

The correct use, operation and inspection are decisive factors for efficient and safe performance.

Prior to assembly check that all parts have been provided. See list of components page 3.

2. List of components

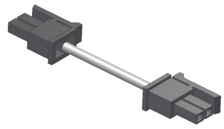
<u>Smartbox 30-69001-8:</u>

The smartbox comprise:

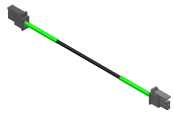
1. Smartbox 98002100: — 1 pc. — (1)



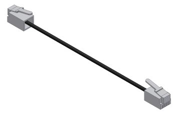
2. Extension cable 98002104: — 1 pc. — (2)
L=3,5 cm male/male plug
(Pos. 2 to safety strip)



3. Communication cable 98002105: — 1 pc. — (3)
L=250 cm male/male plug
(Pos. 3 to previous smartbox)



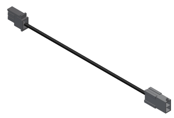
4. Communication cable 98002106: — 1 pc. — (4)
L=50 cm modular cord
(Pos. 4 to controlbox)



5. Communication cable 98002107: — 1 pc. — (5)
L=50 cm Din 7Polet plug
(Pos. 5 to controlbox)



6. Extension cable 98002008: — 1 pc. — (6)
L=250 cm male/female plug
(Pos. 6 to next smartbox Pos. 3)

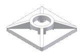


11. Spiral extension cable 98002016: — 1 pc. — (11)
L =25-100 cm (black) to safety strip
(Between Pos. 6 & 3 at the smartboxes)



Common parts: — 1 set

96000155	Adhesive pads	5 pcs.
	Cable tidy strips	10 pcs.





The equipment should always be assembled by competent personnel

3. Connection of Smartbox

3.1 Descriptions

6. Connection to next Smartbox (Comm. Out)

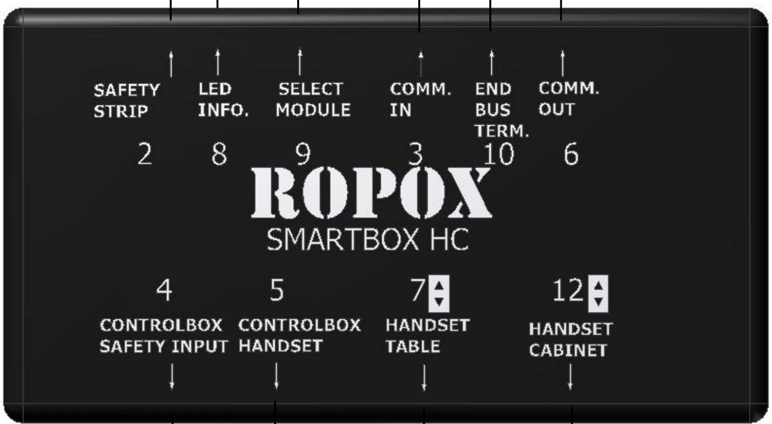
10. Dip switch (indicates first and last Smartbox connected)

3. Communication input from previous Smartbox (Comm. In)

9. Dip switch for Smartbox settings (naming the Smartbox)

8. Led, light (to be used at power up and trouble shooting)

2. Connection of Safety strip



4. Connection to Controlbox, modular plug (Controlbox pinch input)

5. Connection to controlbox, Din plug (To controlbox handset)

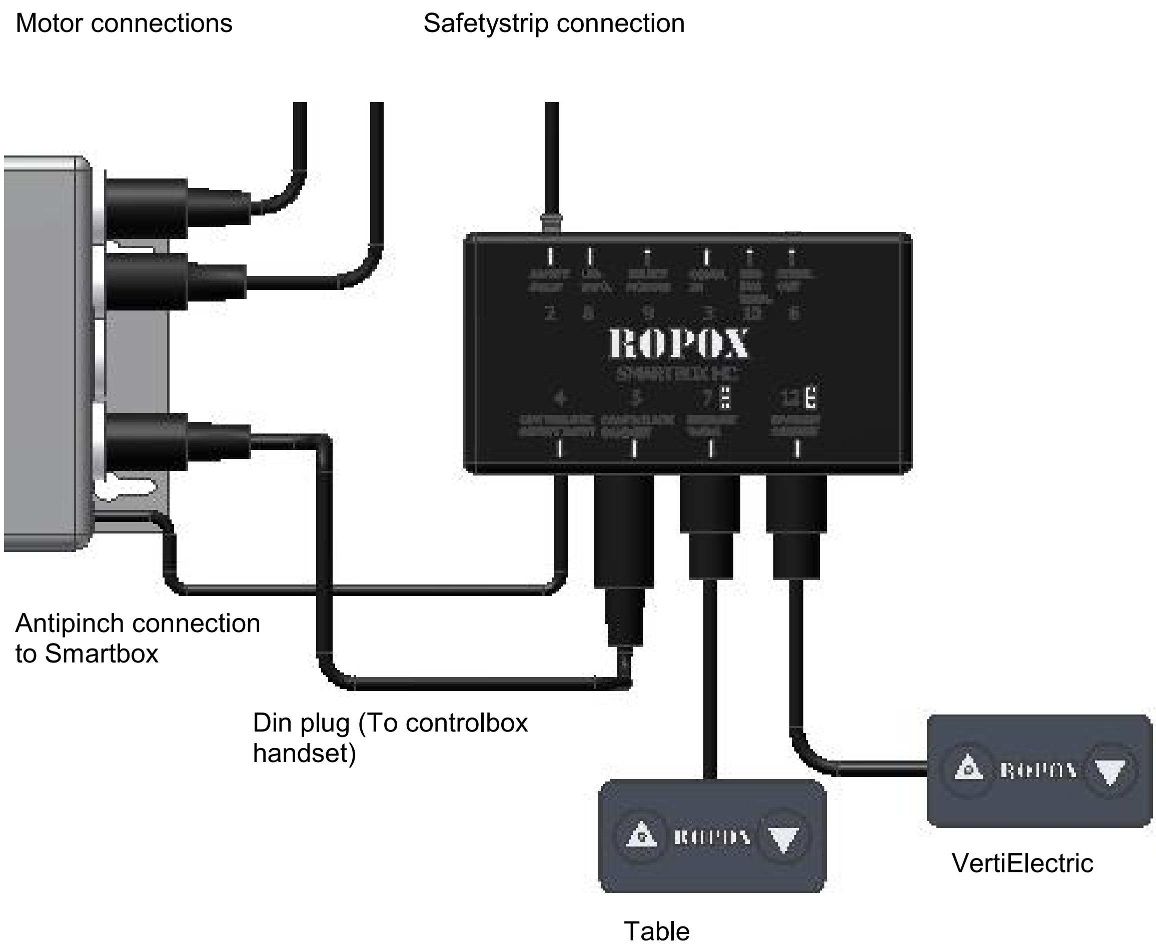
7. Connection of the control switch for the table

12. Connection of the control switch for the VertiElectric (optional)

⚠ **Pos. 3 is not being used on the first Smartbox in the system.**

Pos. 6 is not being used on the last Smartbox in the system.

3.2 Connection of Smartbox to controlbox



3.3 Connection between Smartboxes

From Smartbox (Com. out) to Smartbox (Com. In)
Not in use if this is the first Smartbox in the system

From Smartbox (Com. out) to Smartbox (Com. In)
Use cables (pos. 6 +11+3) Part No. 98002008 + 98002016 + 98002105

From Smartbox (Com. out) to Smartbox (Com. In)
Not in use if this is the last Smartbox in the system



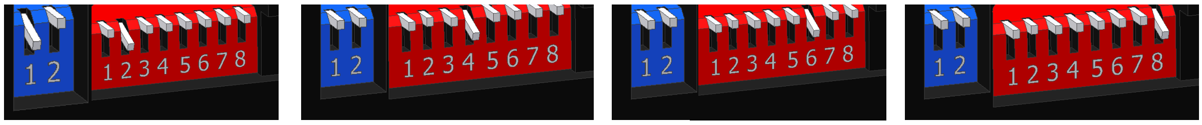
3.4 Connection / naming of 8 Smartboxe in a system

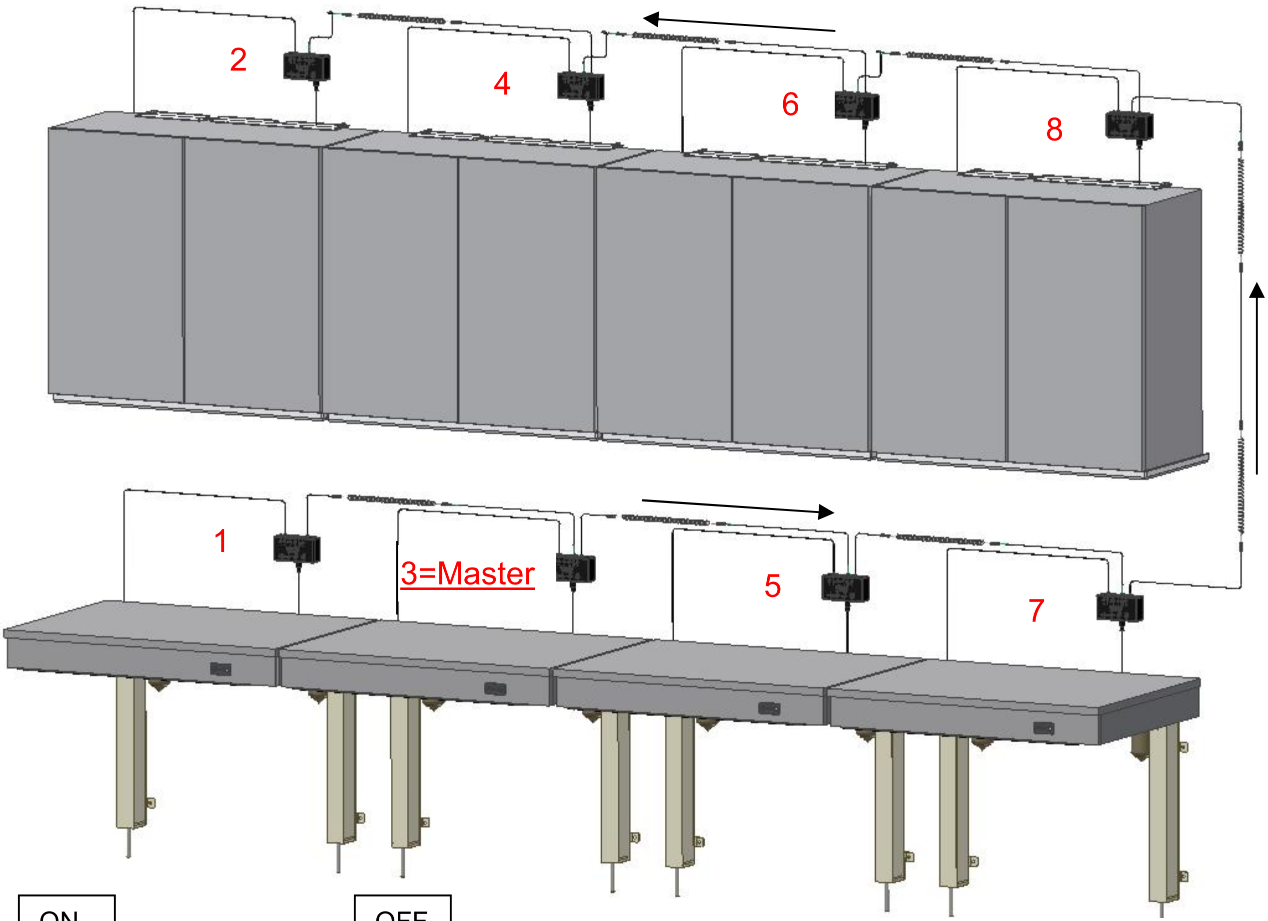
VertiElectric:
Last Smartbox =ON
Smartbox No. 2

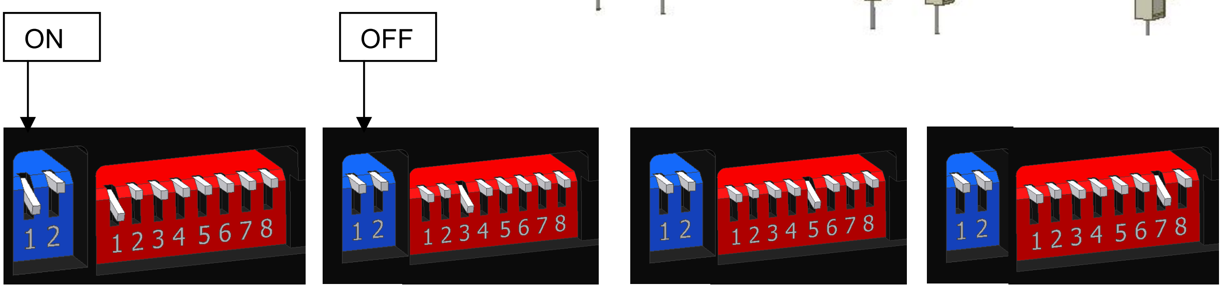
VertiElectric:
Smartbox =OFF
Smartbox No. 4

VertiElectric:
Smartbox =OFF
Smartbox No. 6

VertiElectric:
Smartbox =OFF
Smartbox No. 8







FlexiElectric:
First Smartbox =ON
Smartbox No. 1

FlexiElectric:
Smartbox =OFF
Smartbox No. 3

FlexiElectric:
Smartbox =OFF
Smartbox No. 5

FlexiElectric:
Smartbox =OFF
Smartbox No. 7

4. Initializing the Smartbox

Up to 4 FlexiElectric can be connected side by side by the use of the Smartbox. Above this you can also connect up to 4 VertiElectric side by side. This means that you can connect a maximum of 8 Smartboxes in one system. To see your combination possibilities, please refer to page 9.

⚠ All Smartboxes are given a unique number!

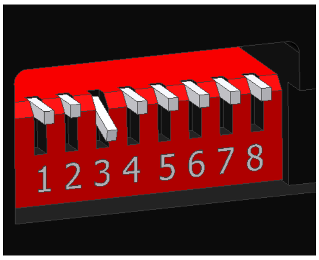
FlexiElectric: Can only achieve uneven numbers as 1, **3**, 5, og 7.
VertiElectric: Can only achieve even numbers as 2, 4, 6, og 8

⚠ **Smartbox No. 3 is ALWAYS master, and must ALWAYS be a part of your system.**

4.1 Numbering the Smartbox on the 8 polet DIP switch (Pos. 9):

Set the dipswitch with the number of the unit FlexiElectric or VertiElectric, this example is for FlexiElectric No. 3, which also are the master box

See also schematics page 8



4.2 Indicate / Set first and last Smartbox in the system (Pos 10):

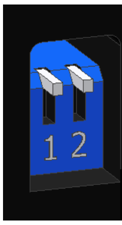
You need to tell the system how many Smartboxes you have in the system. You have to indicate / set the **first** and the **last** Smartbox in the system. Use the DIP switch (pos 10) by setting No. 1 in ON position, both on the **first** and also on the **last** Smartbox . All other Smartboxes in the system has to be OFF.

See also schematics page 8



(No. 2 is not in use).

ON



OFF

4.3 Perform Master reset:

Connect main power to all the controlboxes in the system.

Perform a reset of the master Smartbox (No. 3) - Deactivate the master by setting DIP switch (Pos. 9) to OFF. Activate again by setting it back to ON.
When you make this reset, the master will count the numbers of Smartboxes connected in the system, and the LED (Pos 8) will flash the numbers.

After this procedure, the LED will turn off and work as normal

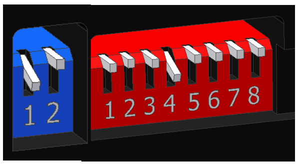
By activating the Safety strip, the LED will light up

Make a performance test according to section 6.

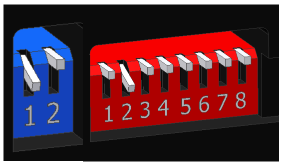
5 Examples

See more combinations page 12

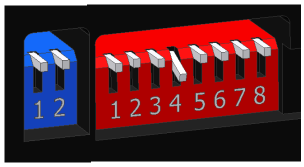
Last Smartbox =ON
Smartbox No. 4



Last Smartbox =ON
Smartbox No. 2



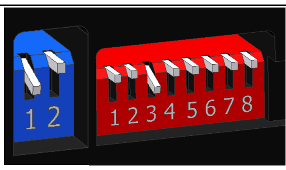
Smartbox =OFF
Smartbox No. 4



4.

4

3

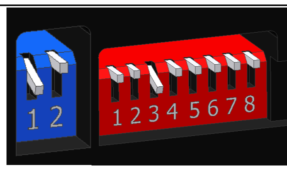


First Smartbox =ON
Smartbox No. 3 = Master

5.

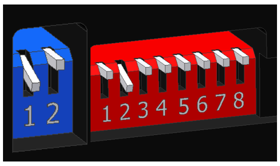
2 4

3

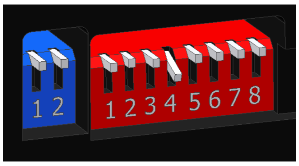


Frst Smartbox =ON
Smartbox No. 3 = Master

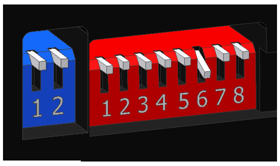
Last Smartbox =ON
Smartbox No. 2



Smartbox =OFF
Smartbox No. 4



Smartbox =OFF
Smartbox No. 6



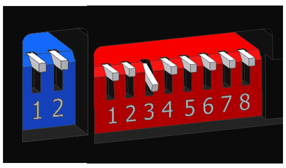
12.

2 4 6

1 **3**



First Smartbox =ON
Smartbox No. 1



Smartbox =OFF
Smartbox No. 3 = Master

6. Performance test

6.1 Performance test, electrically operated frame

After installation and prior to use, all anti pinch functions of FlexiElectric and VertiElectric must be tested. The test must be carried out by competent personnel. Subsequently the test shall be carried out at least once a year:

Testing prior to connection of mains voltage:

1. Check that the mounting instructions have been observed.
2. Check that all cables have been connected correctly and that the plugs have been pressed home.
3. Check that there are no load on the FlexiElectric or VertiElectric frames.
4. Check that there is nothing preventing the FlexiElectric or VertiElectric from moving freely within the height adjustment range.

Now connect mains voltage to the control unit and proceed as follows:

5. Check that LED on master Smartbox (No. 3) flashes with the number of connected Smartboxes.

For every FlexiElectric the following tests must be carried out:

6. Press DOWN on the control switch, move the FlexiElectric frame to bottom position and check that the movement is even and smooth.
7. Press UP on the control switch, move the FlexiElectric frame to top position and check that the movement is even and smooth.

Test of the safety between the FlexiElectric frames:

8. Safety strip (downwards movement) on every FlexiElectric must be tested – See also instructions in the FlexiElectric Manual
9. Move the first FlexiElectric to the top position, and the next FlexiElectric to the bottom position
10. Press UP on the control switch (next FlexiElectric) and let the frame move 2-5 cm upward. Now activate the safety strip on the first FlexiElectric by pressing it lightly. The frame must stop the upward movement, move 1-2 cm downward and stop.
11. Test the rest of the FlexiElectric frames according to these procedures to make sure that all risk of trapping has been tested and found safe.

Test of the safety between the FlexiElectric frames and the above VertiElectric:

12. First perform a performance test according to the VertiElectric Manual on each unit
13. Test one FlexiElectric at a time by moving it upwards, pressing the safety stopplate on the above VertiElectric shall stop the upward movement, move 1-2 cm downward and stop.
14. Follow the above instructions to make sure that all combinations / trapping risk has been passed (refer to combination possibilities section 9)

If all these tests are ok, the system of frames are ready for use.

7. Cleaning and Maintenance

7.1 Cleaning

⚠ The frame must not be connected to the mains voltage during cleaning.
Do not flush electrical components with water. ⚡

⚠ Smartbox must only be cleaned with a soft dry cloth

8. Trouble shooting

8.1 LED indications

Master	Slave	LED	Description
X	X	No light	Everything is ok
X	X	Steady light	Safety strip activated, or fault on safety strip on this Smartbox
X		1 Flash	Communication error
X	X	2 Flashes	Awaiting feedback from other smartboxes
X	X	3 Flashes	Faulty DIP switch settings
X		4 Flashes	Numbers of Smartboxes variates from original
X		2-8 Flash	Indicates the number of connected Smartboxes at power up, or when master (Flexi 3 DIP switch (Pos. 10) switches from OFF to ON.

Communication error:	Stopping all movements on master.
Awaiting feedback:	Stopping all movements on this Smartbox
Faulty DIP switch settings:	Stopping all movements on this Smartbox
Number of Smartboxes variates:	Stopping all UP movements on all Smartboxes (downward is ok if the Safety strips is ok)

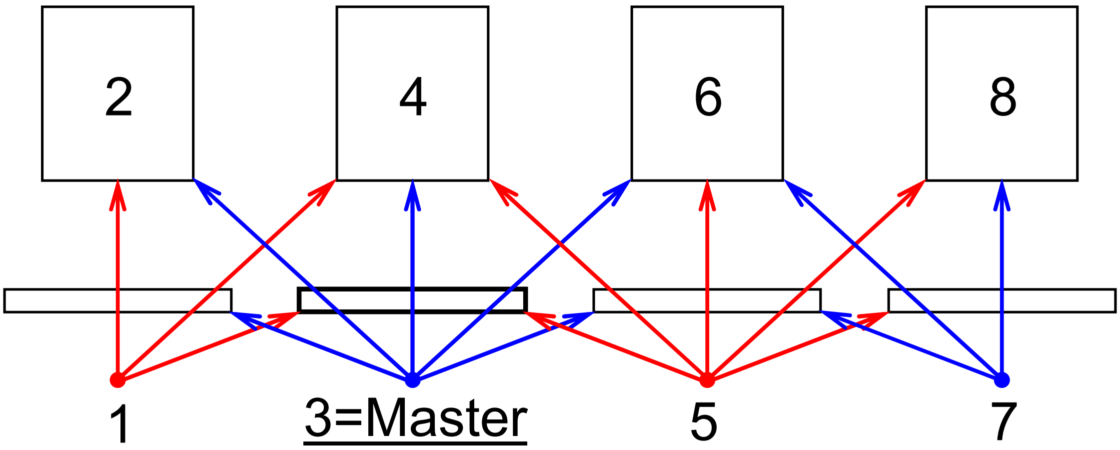
9 Combination possibilities & trapping risks

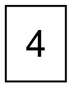
When you have a combination of Ropox electrical frames, you can remove all trapping risk by using the Ropox Smartbox.

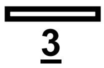
On top of using the standard Safety strip and safetystopplates, this shows where the trapping risk will occur when putting up a system like this. By using the Smartbox you will solve this, and make your system even safer to use.

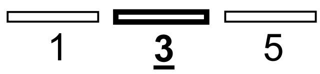
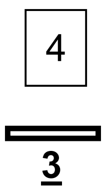
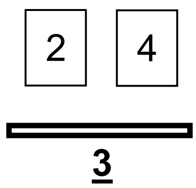
⚠ **IMPORTANT** : It is very important that the layout is according to this schematic, and that the Smartbox has been installed according to this manual, and the manuals for FlexiElectric and VertiElectric has been followed.

Arrows shows the extra risk of trapping that are covered by using this Smartbox. Ex. FlexiElectric No. 3 will stop upwards movement if safetystopplate on Verti No. 2,4 & 6 are activated, or the Safety strip on Flexi No. 1 & 5 are activated.



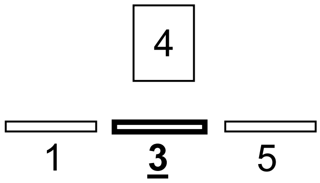
Wallunit mounted on a VertiElectric, ALWAYS even No.: 

Worktop mounted on a FlexiElectric, ALWAYS uneven No.: 

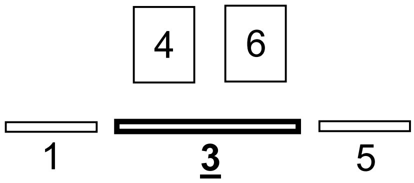
1. 	2. 
3. 	
4. 	5. 

6. 2 4 6 **3**	
7. 4 **3** 5	8. 4 1 **3**
9. 4 6 **3** 5	10. 4 6 1 **3**
11. 2 4 6 **3** 5	12. 2 4 6 1 **3**
13. 4 6 **3** 5	
14. 4 6 8 **3** 5	15. 2 4 6 1 **3**
16. 2 4 6 8 **3** 5	
17. 2 4 6 8 **3** 5	18. 2 4 6 8 1 **3**

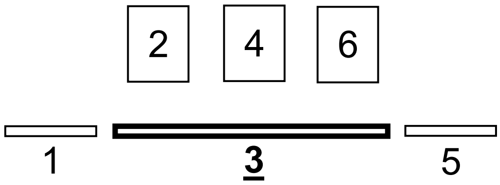
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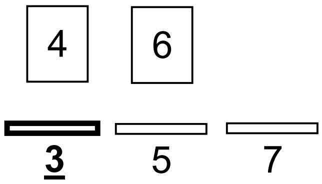
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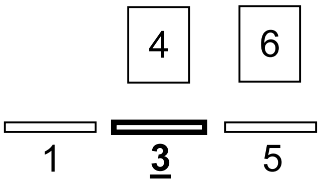
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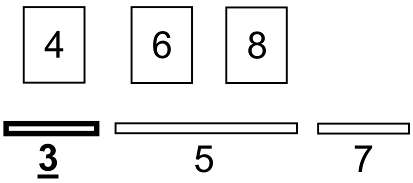
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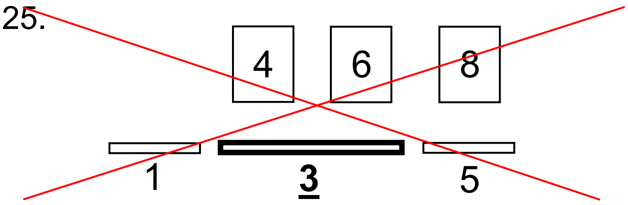
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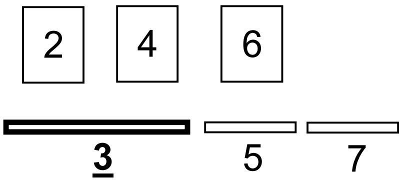
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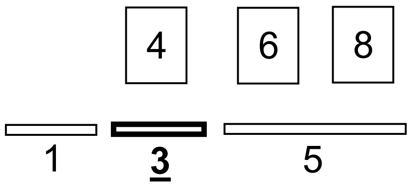
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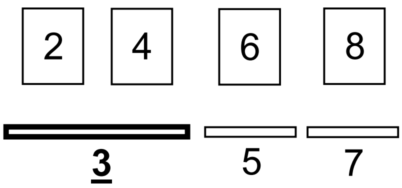
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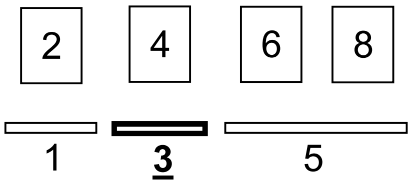
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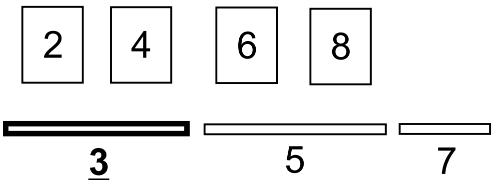
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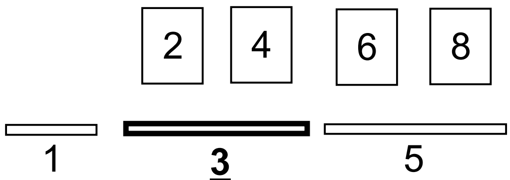
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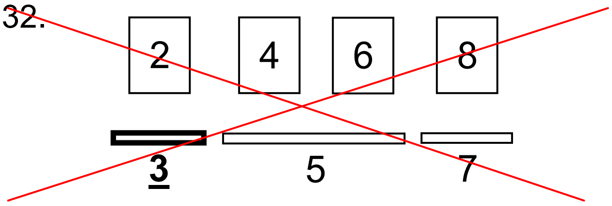
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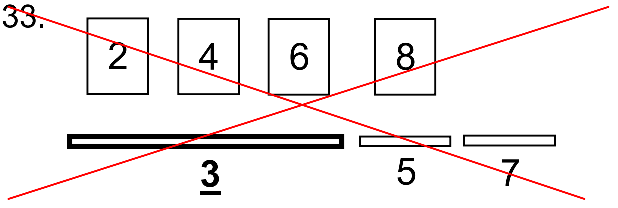
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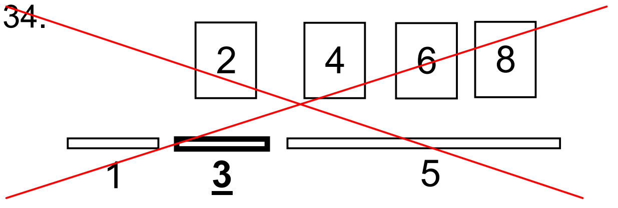
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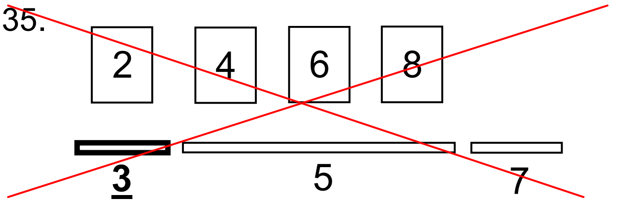
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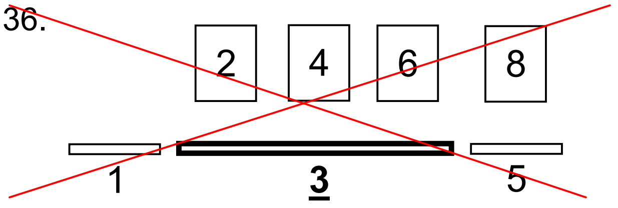
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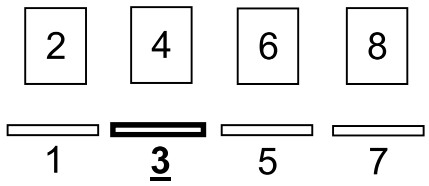
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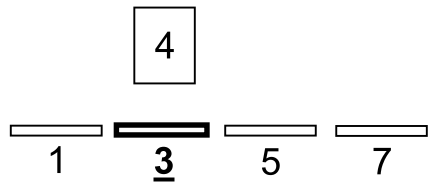
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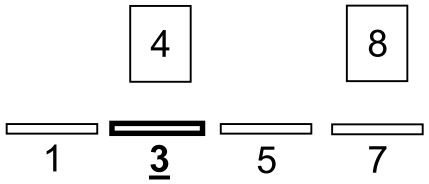
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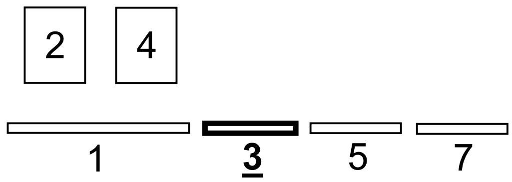
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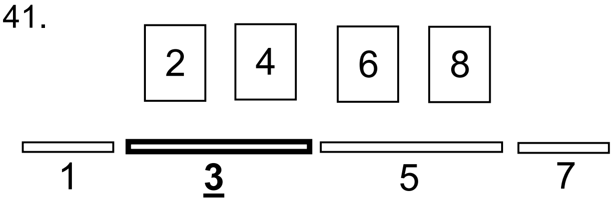
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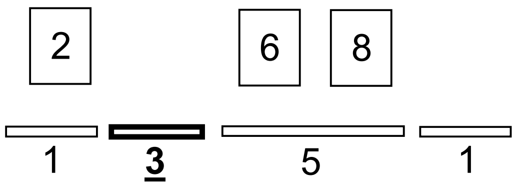
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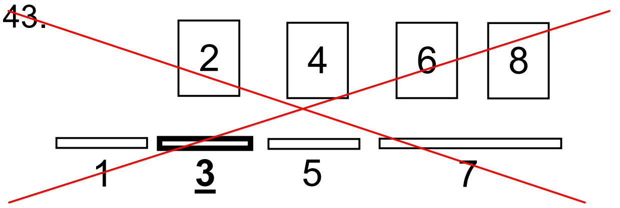
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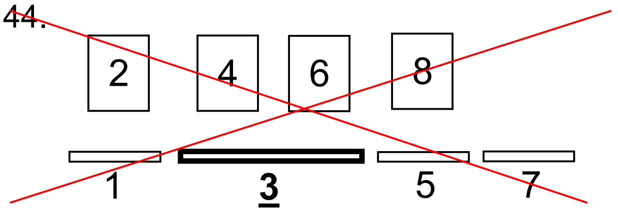
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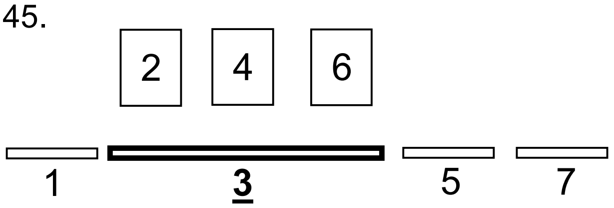
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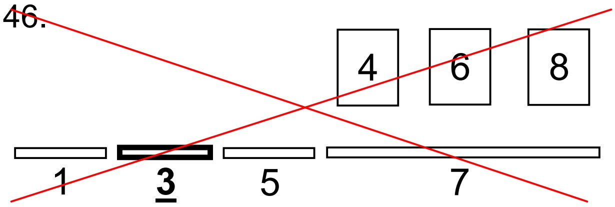
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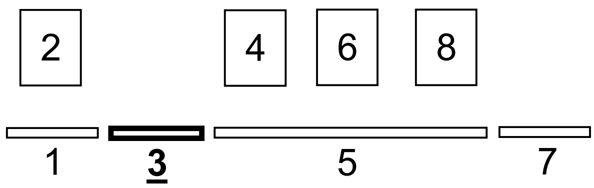
45.



46.



47.



10. CE-Marking

I hereby declare under sole responsibility that the following product:

30-69001 Smartbox

conform to the following directives and standards:

DIRECTIVES

- 73/23EEC, Low voltage directive
- 89/336/EEC, EMC-Directive

STANDARDS

DS/EN 60335-1 : 2002
DS/EN 61000-6-1: 2001
DS/EN 61000-6-3: 2001

11. Complaints

We refer to our general Terms of sale and delivery on our homepage www.ropox.com

CE

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